

(c) REMARKS

This application has been reviewed in light of the Office Action dated May 21, 2008. Claims 1-13 and 16-23 are presented for examination. Claims 14-15 have been canceled, without prejudice or disclaimer of subject matter. Claims 1 and 6 have been amended to define still more clearly what Applicants regard as their invention. Claims 16-23 have been added to provide Applicants with a more complete scope of protection. Claims 1, 6, 16-18 and 21 are in independent form. Favorable reconsideration is requested. The canceled claims will not be further addressed herein.

In claims 1 and 6, “alkylol” is amended to read --alkoxylol-- as shown in Units 4 and 5 on page 19 and Compound 9 on pages 41 and 42.

The objection to claim 14 has been rendered moot by its cancellation.

Claims 1-5 were rejected as anticipated by Nguyen ‘601 or as obvious over Imai ‘914 in view of Murata ‘802. Claims 6-14 were deemed obvious over Kubota ‘423 in view of Imai ‘914 and further in view of Murata ‘802. The grounds of rejection are respectfully traversed.

It is a feature of the present claimed invention that a polyacrylate resin of general formula (1) is crosslinked with a condensable crosslinker. An intermolecular crosslinking resin forms between the polyacrylate resin and the crosslinker. The crosslinker may preferably be a melamine compound, such as that of formula (2). The polyacrylate-melamine cross-linking reaction which occurs upon heating causes an increase in molecular weight and enhances solvent resistance. The main-chain is then disintegrated via irradiation of the crosslinked film through a mask to conduct patterning. The disintegrated main chain forms a low

molecular weight compound which rapidly dissolves to permit removal. This permits an ink jet head to be formed expediently. See Examples 1-8.

It is an important feature of the present invention that the polyacrylate of general formula (1) be employed. As shown in Units 1-5 on page 19 a copolymer is formed of an (a) acrylate where one unit has a R₃ substituent as (1-3) alkyl, (1-3) alkoxy or aralkyl, where in the aralkyl group the alkyl is 1-2 carbons and (b) a second acrylate where X is hydroxyl, alkoxylo or methylolamine. The condensable crosslinker is preferably a melamine of general formula (2) which reacts with the pendant hydroxyl groups of the polyacrylate to form tough films where crosslinking occurs.

With regard to the anticipation rejection based on Nguyen '601, a broad variety of binder resins is disclosed therein in Col. 3, lines 9-26. Polystyrenes, novolac resins, polyacrylamides and copolymers of styrene, vinylphenols, arylamides, acrylates and/or acrylic acids are disclosed. Likewise, a broad array of crosslinking resins are disclosed, as resoles, glycolurils, polystyrenes, acrylamides and melamines. However, in none of the Nguyen Examples is a polyacrylate of formula (1) utilized with a condensable crosslinker. In Examples 2 and 14, a melamine resin is reacted with a specific acrylate copolymer having three different acrylate units including a cyclohexyl methacrylate and/or a styrene/methacrylate/acrylic acid, which is different from formula (1). There is no teaching of the present claimed combination. Further, the preferred crosslinking resin is a resole, a glycoluril, a polystyrene-acrylate polymer or a phenolic resin, but not a melamine of formula (2).

The obviousness rejections are predicated on Murata as teaching a condensable crosslinker which is said to be obvious to combine with the polyacrylates of Imai or Kubota.

However, Murata discloses that the melamine resin is reacted with a novolak or a polyvinylphenol resin, Col. 3, lines 15-18. Therefore, there is no suggestion or motivation to apply the melamine to a resin of formula (1).

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

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